ABSTRACT

A method and a device for multi-selection detection is disclosed in the present invention. In the said method, the length L used for the signal detection may be divided into $N_{multicoh}$ segments, then the coherent accumulating is performed; and various possible combinations will be made according to each coherent result; then those possible combinations may be coherent accumulated again; finally, the optimum ones may be selected as the detection results. The said device comprises a matched filter unit; two or more branch units; and a branch selection unit. The input signal is input to the matched filter unit for carrying out matched and filtering; the output of the matched filter unit will be sent to each branch unit respectively; the phase adjustment and the coherent accumulation of the signal will be performed in each branch unit respectively, and then sent to the branch selection unit; the branch output of selecting the largest mode is performed by the branch selection unit.

The disadvantages of the detection methods in the prior art are overcome by the method of the present invention. The influence of the frequency shift and the phase rotation that reduces the signal detection performance can be suppressed by the said method in a certain area, and the signal detection performance and the probability are improved.